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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,520	02/02/2006	Abbas Razavi	F-863 (31223.00086)	9377
25264	7590	10/05/2007		
FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412			EXAMINER LU, C CAIXIA	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 10/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,520	Applicant(s) RAZAVI, ABBAS	
	Examiner Caixia Lu	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/13/07</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 46 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the preparation of atactic olefin polymer, does not reasonably provide enablement for the preparation of propylene polymer comprising isotactic and syndiotactic polymer blocks. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. In general, a metallocene catalyst is for preparation of olefin polymer with atacticity, isotacticity or syndiotacticity. There is no publish literature about using a single catalyst to prepare a stereoregular polypropylene with both isotactic and syndiotactic blocks. Since the Specification has not expressly indicate which metallocene catalyst can be used to provide a stereoregular propylene polymer with both isotactic and syndiotactic blocks, the instant claims is thus not enabled.

2. Claims 22-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 22, 33 and 43, the term derivative is improperly used to refer the group which is not a derivative of the group. The cyclopentadienyl or fluorenyl group is not a derivative of cyclopentadienyl or fluorenyl group. Appropriate correction is again requested.

Specification

3. The disclosure is objected to because of the informalities corresponding to those as indicated in the rejection under 35 U.S.C. 112, second paragraph as shown above and in previous Office Action. Appropriate correction is again requested.

Claim Rejections - 35 USC § 103

4. Claims 22-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al. (EP 0 741 145).

Katayama teaches a metallocene catalyst complex represented by Formula (I) for olefin polymerization (page 3, line 35 to page 4, line 56), the metallocene complexes are bridged or unbridged and the bridged metallocene complexes are exemplified such as ethylenecyclopentadienyl pyrrolyl titanium dichloride and dimethylsilylindenyl triphenylphospholyl titanium dichloride (page 5, line 34 to page 9, line 18). It is noted that Katayama does not exclude any of the bridge position relative to nitrogen or phosphorus in the ring, one would have understood that all positions including nitrogen or phosphorus position in the ring can be the bridging position.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Katayama's teaching to prepare various metallocene complexes such as those represented by Formula (II) of claim 25 and use those metallocene catalysts to conduct olefin polymerizations in search for catalysts with superior activities or stabilities or stereoregularities since such is within the scope of the Katayama's teaching and in the absence of any showing criticality and unexpected results.

Response to Arguments

5. Applicant's arguments filed August 13, 2007 have been fully considered but they are not persuasive.

Response regarding the rejection under 35 U.S.C. 112, first paragraph

Applicant has provide US 6,265,503 B1 and US 6,184,318 to show a propylene polymer comprising isotactic and syndiotactic polymer blocks made from a single catalyst. The polypropylenes disclosed as Example 2 in both US 6,265,503 B1 and US 6,184,318 are identical which contains about 19.82% of [mmmm] and 15.24% of [rrrr]. One of ordinary skill in the art would understand that the other 64.94% of the propylene polymer is neither [mmmm] blocks nor [mmmm] block, i.e., the majority of the polymer chain is irregularly atactic. Therefore, the propylene of Example 2 of the cited patents is not a stereoregular polypropylene with both isotactic and syndiotactic blocks and the rejection is deemed proper and thus maintained.

Response regarding the rejection under 35 U.S.C. 103(a)

Applicant argues that Katayama does not teach a bridged catalyst systems in Compound A. This is incorrect. In lines 55-56, Katayama expressly teach that R¹ and R² may be bonded together. It is understood that the metallocene Compound A with R¹ and R² bonded together is a bridged metallocene and those bridged metallocene are exemplified as, e.g., ethylenecyclopentadienyl pyrrolyl titanium dichloride and dimethylsilylindenyl triphenylphospholyl titanium dichloride (page 5, line 34 to page 9, line 18). While Katayama does not expressly indicate the position of the bridge relative to nitrogen or phosphorus in the ring, Katayama does not exclude any of the bridge

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positions either, one would have understood that all positions including nitrogen or phosphorus position in the ring can be the bridging position. In view of the foregoing, the rejection still deemed to be proper and thus maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.



Caixia Lu, Ph. D.
Primary Examiner